

Impact case study (REF3)

Institution: University of Bristol		
Unit of Assessment: 22) Anthropology and Development Studies		
Title of case study: Pioneering the application of evolutionary anthropology to improve international development policy and reproductive health interventions in Ethiopia		
Period when the underpinning research was undertaken: 2000-2018		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Mhairi Gibson	Professor in Anthropology	2005-present
Period when the claimed impact occurred: August 2013-November 2020		
Is this case study continued from a case study submitted in 2014? N		

1. Summary of the impact

Through pioneering the application of evolutionary anthropology to public health policy, Professor Gibson's research has transformed government and non-governmental organisation (NGO) campaigns to improve public health across Africa. Her research tackles two key population-health challenges in Africa: how to design more sustainable rural development interventions; and how to limit and eradicate female genital mutilation/cutting. Since 2013 this work has benefitted stakeholders from UK government to Ethiopian government, NGOs, academia and rural communities, including: a) changing development policy and practice away from single-focus towards community-based approaches; b) improving access to existing family planning services, and improving the nature of sexual reproductive health services for local communities in Ethiopia; and, c) increases in skills capacity, including job creation to tackle population health issues in Ethiopia.

2. Underpinning research

Gibson's research has pioneered the application of evolutionary anthropology to questions of contemporary public health and social policy. This work uses theories from evolutionary biology to understand reproductive behaviour and child-care practices, and to inform the design of effective rural development intervention in rural Africa.

1. Demographic consequences of development

Over the period 2000-2013, Gibson tested novel evolutionary life history theory predictions, identifying that trade-offs exist between fertility and energy balance, thereby revealing unforeseen demographic consequences of rural development. This finding is based on long-term fieldwork and co-produced research in 5 rural Arsi Oromo villages (c.1,400 households) in Southern Ethiopia (2000-2012). The research demonstrated that in the absence of family planning, rural labour-saving development initiatives can result in higher birth rates, which combined with increases in child survival due to improved water supply has led to larger family sizes and household resource constraints (including restricted child growth and out-migration). The findings and broader approaches linked with applied evolutionary anthropology have (a) demonstrated the need for culturally appropriate family planning and reproductive services to be combined with other forms of development intervention, and (b) supported arguments for community-based, "bottom-up" rather than vertical, "top-down" intervention initiatives [3.1, 3.2, 3.3].

2. Understanding the persistence of female genital cutting

Since 2016, Gibson has extended this research, and worked alongside development stakeholders (UNFPA/UNICEF, 28 Too Many & The Orchid Project), using a similar scientific approach to shed light on a normative practice harmful to women across Africa, namely female genital cutting (FGC). This collaboration improves understanding of why FGC persists despite considerable efforts from policymakers and practitioners to eliminate the practice. The research

Impact case study (REF3)

includes: (a) developing indirect questioning methods to record more accurate data on these sensitive behaviours (which are prone to under-reporting) [3.4]; (b) helping stakeholders to more confidently identify high risk groups [3.4]; and (c) revealing the cultural evolutionary forces and dynamics which drive the persistence of harmful behaviours [3.5]. This has identified that the people most inclined to favour FGC conceal their support for the practice when questioned openly. These individuals are among the most influential in society (they are older and more educated), indicating that poorly designed anti-FGC campaigns may not change behaviour, rather they can lead to increased concealment to avoid detection [3.4].

Gibson led this research during PhD and postdoctoral studies, and since 2005 at the University of Bristol. This has involved collaborations with Addis Ababa University (Eshetu Gurm) since 2010, NGO stakeholders (For-Ethiopia), statisticians at the University of Granada (Beatriz Cobo and Maria del Mar Rueda) and University of Bristol postdoctoral and graduate students (Tigist Grieve, Lucie Clech, Isabel Scott & Janet Howard) since 2015.

3. References to the research

Demographic consequences of development (2002-2012)

- 3.1 **Gibson MA** (2014). How development intervention drives population change in rural Africa: a case study of applied evolutionary anthropology, in **Gibson MA** and Lawson DW (Eds) *Applied Evolutionary Anthropology: Darwinian Approaches to Contemporary World Issues*. New York: Springer [Available on request]
- 3.2 **Gibson MA** and Gurm E (2012). Rural to urban migration is an unforeseen impact of development intervention in Ethiopia, *PLOS ONE*, **7:11**, e48708
<https://doi.org/10.1371/journal.pone.0048708>
- 3.3 **Gibson MA** and Mace R (2006). An energy-saving development initiative increases birth rate and childhood malnutrition in rural Ethiopia, *PLOS Medicine*, **3:4**, pp. 476-484
<https://doi.org/10.1371/journal.pmed.0030087>

Understanding the persistence of female genital cutting (2016-2020)

- 3.4 **Gibson MA**, Gurm E, Rodriguez BC, Rueda M and Scott IM (2018). Indirect questioning methods reveal hidden support for female genital cutting in South-Central Ethiopia, *PLOS ONE*, **13:5**, e0193985 <https://doi.org/10.1371/journal.pone.0193985>
- 3.5. Howard JA and **Gibson MA** (2017). Frequency dependent female genital cutting behaviour confers evolutionary fitness benefits, *Nature Ecology and Evolution*, **1**, 0049,
<https://doi.org/10.1038/s41559-016-0049>

Grants

Gibson MA, Gurm E and Scott I (Co-PIs), *Measuring harmful cultural practices using randomised response techniques*, Wellcome Trust, 2015-2017, GBP44,000

Gibson MA (PI), *The demographic impact of development*, ESRC Impact Acceleration Award, 2014-2016, total: GBP20,000, with Tigist Grieve, 2015, GBP15,000

Gibson MA (PI), *The impact of a water development initiative on migration in rural Ethiopia*, Leverhulme Trust, F00182/BI, 2008-2011, GBP110,336

4. Details of the impact

By challenging poorly designed rural development intervention projects [3.1, 3.3, 3.4], Gibson's research has transformed development policies and practice in the UK and Ethiopia. Significant impact has occurred in three ways: 1) shifting the development policy agenda of UN agencies, UK government and NGOs; 2) improving access to existing family planning services and improving the nature of sexual reproductive health services for local communities in Ethiopia; and 3) building increased skills capacity for development stakeholders in Ethiopia.

Impact case study (REF3)

1. Shifting development policy and practice of government and NGO policymakers

Gibson's research has led to the following key policy changes:

- I. Development interventions which impact on women's energy levels should routinely include access to culturally appropriate reproductive services.
- II. All interventions in low resource contexts should include an assessment of the unmet need for family planning.
- III. Small-scale, community-based schemes, which consider the cross-section of communities' needs, are likely to be more effective than single-focus, top-down intervention.
- IV. Investment is needed in comprehensive monitoring and evaluation of the long-term impact of aid.

UK Government

Gibson was invited to present to the All-Party Parliamentary Group (APPG) on Population Development and Reproductive Health at the UK Houses of Parliament in November 2018. The meeting was attended by the then Shadow Foreign Minister, and member of the Foreign Affairs Select Committee, six peers on various APPGs, as well as Oxfam and representatives of other NGO advocacy groups. Following the meeting, the Shadow Foreign Minister commented that the research presented will 'help inform [government] discussions on women's health' [5.1]. Further feedback from policymakers identified how the research would be used, specifically by highlighting how 'meeting unmet need [for family planning] is vital with far-reaching and beneficial consequences' [5.1]; and to argue for community-based, multisectoral rather than single-focussed intervention in UK-funded aid projects. Further, Gibson's research is being used to improve longer-term monitoring and evaluation of development intervention [5.2, 5.3, 5.6].

Non-Government Organisations

Gibson's research identifying the need for more evidence-based intervention [3.1-3.3] and possible blind-spots in development programming attracted the attention of Ethiopian NGO For-Ethiopia (<https://for-ethiopia.com/>) resulting in successful ESRC-IAA funding bids (totalling over GBP25,000) for founder and trustee of the NGO, Dr Tigist Grieve, to undertake a Knowledge Exchange Secondment to the University of Bristol (2016-2018). This collaboration led to a commitment from the NGO to refocus on multisectoral community-based projects shifting the focus of their development work in their 5-year strategy, which targets over 30 schools in 27 rural sub-districts and three peri-urban settings in South-Central Ethiopia. Furthermore, Gibson's research promoted to Grieve to '[ensure] all [our] future programmes considered women's and girl's reproductive health and hygiene needs' [5.3]. Gibson's research on the unforeseen consequences of poorly designed rural development and intervention gave For-Ethiopia the confidence, knowledge and authority to campaign for evidence-based but community-led development. Gibson's support has already led them to secure further funding (GBP25,000) from the Africa Foundation for Development. [5.3]

The research has led to closer engagement between other development practitioners and academia in Ethiopia following a series of development stakeholder engagement workshops co-organised by Gibson, Grieve and For-Ethiopia in Addis Ababa in 2016 and 2017. This led directly to the establishment of Ethiopia's first *Development Stakeholder Forum* in 2018 for benefit of Ethiopian academics and development practitioners. This discussion forum and linked workshops co-organised by Gibson and For-Ethiopia have been described by the Chair of For-Ethiopia as leading to 'a paradigm shift in the way that Ethiopian academics and development practitioners work together' [5.3]. By promoting and enabling regular engagement and continuous discussion between academics, NGO and government stakeholders this has allowed closer, equitable partnerships and a re-focus towards active evidence-led development [5.5]. At a meeting in January 2018, commitments were made by the Addis Ababa University Vice President of Research and CCRDA (an umbrella organisation for NGOs in Ethiopia) to support the forum. This forum now meets regularly, to share resources, and promote the value of research in the development sector, engaging with policy makers and influencing policies [5.5]. The Oromia Regional Government described the partnership between University of Bristol and Addis Ababa University as a clear example of how a true partnership between research, policy

Impact case study (REF3)

makers and implementers can result in programmes that actually make a difference in taking care of women and children's lives. The research has been used to evaluate "the Growth and Transformation Plans implemented in the region during Phase I (2011-2015) and Phase II (2015-2020) and developing the newly adopted Ten Years Perspective Plan (2021-2030)" [5.8].

United Nations & Global Policymakers

Gibson's research revealing how campaigns which focus on raising awareness may result in hidden FGM/C practice [3.4] is currently leading to a shift in international policy debates regarding the most effective forms of intervention to end FGM/C throughout Africa and beyond. It is refocussing efforts towards improving FGM/C data quality and monitoring and evaluation efforts, and away from campaigns which are based exclusively on increasing education or legislation [3.4]. In March 2019, Gibson was invited by the UK Director of the UNFPA (The United Nations Population Fund) to present these findings to the UNFPA-UNICEF joint programme on the Elimination of Female Genital Mutilation. This webinar attracted over 40 technical specialists and programme officers in UNICEF/UNFPA offices across 10 countries. Dr Nafissatou Diof, Coordinator of the UN Joint Programme, commented on how the innovative research and methods were 'helpful to the joint [UNFPA/UNICEF] programme's technical teams in the field, especially those working in monitoring and evaluation... [It shows us] how FGM may be increasingly misrepresented using [our] traditional survey methods' [5.6]. The value of Gibson's research is also highlighted in a UNFPA and Office of the United Nations High Commissioner for Human Rights (OHCHR) background paper for an expert meeting on FGM organised by UN Human Rights Council [5.2].

In May 2019, two UK-based not-for-profit organisations – 28 Too Many (<https://www.28toomany.org/>) and the Orchid Project (<https://www.orchidproject.org/>) – approached Gibson for advice on their anti-FGM/C campaigns. They identified the importance of Gibson's research, which questions global FGM/C data quality and anti FGM/C policy focussing exclusively on raising awareness. The Operations Manager for 28 Too Many stated that 'efforts to stop the practice are being frustrated by lack of accurate data. Dr Gibson's research has provided us with an opportunity to close some of the data gap' [5.4]. The research is enabling development practitioners to improve and accelerate these international campaigns to end FGM/C throughout Africa and beyond [3.4].

2. Improving access to family planning and the nature of reproductive health services in Ethiopia

Gibson's research has documented increasing local interest in contraception in rural South-Central Ethiopia, where local people struggle to access culturally appropriate forms of family planning and family sizes are growing [3.3, 3.1]. This study site includes 8 villages and around 8,000 people. Local people report that these findings have been used to highlight the sexual and reproductive needs of the community and to provide leverage for their demand for improved access to reproductive health services and family planning from the central government. *Please note, Gibson was due to travel to Ethiopia in March 2020 to obtain interviews with local communities regarding how they have benefited from improved access to family planning. However, due to COVID-19 travel restrictions, it has not been possible to obtain these interviews.*

The regional government have confirmed that Gibson's research has been an important influence in revising programmes and strategies to address unmet women's needs by revealing existing 'gaps in [the] protect[ion of] the well-being of women and children' in Oromia [which is the largest and most populous region in Ethiopia with over 35 million people] [5.8]. The regional government also identifies that the research has offered recommendations for improving rural development that are 'very practical and workable' [5.8]; for example, the routine assessment of women's needs in any intervention (particularly their sexual and reproductive health needs) [5.8].

Impact case study (REF3)

3. Skills capacity building in Ethiopia

Gibson's research has led to significant capacity building at Addis Ababa University (Ethiopia) through training the next generation of academics and development practitioners. Between 2016 and 2018 Gibson provided advanced methodological training and analytical computer software training (NVivo and MlwiN) to staff and graduate students, who have subsequently incorporated it into their teaching curriculum; exchanges for staff and PGRs, the development of Ethiopia's first PhD programme in Population Sciences launched in 2020 [5.7] and the creation of over 43 posts and training programs for field staff and technicians employed at the University. This capacity building and skills development is important to Ethiopia, as high-income country researchers dominate the academic discourse on population health issues. However, it is crucial to population health efforts in Africa that these technologies and skills be shared with, and developed by, African researchers, as they have the greatest understanding of the local contexts in which development occurs [5.7]. The University stated: '[Gibson]'s contribution in such ways is believed to make a significant difference given the shortage of senior and qualified staff in the field of population studies and anthropology in Ethiopia... the research on the unexpected effect of education on youth migration from rural areas paved the way for redesigning a rural development program that gives due attention to job creation in rural areas for educated household members in conserving soil and forest, breeding high milk yield cows, renting and maintenance of agricultural machineries, and formation of cooperatives to engage in commercial farming' [5.7].

5. Sources to corroborate the impact

5.1 Quotes from the *APPG presentation at the House of Parliament* (19th November, 2018)

5.2 Extract from UNFPA and UN Human Rights (OHCHR) Expert Meeting on Female Genital Mutilation (FGM), chaired by the Human Rights Council – Background Paper by Annemarie Middelburg (2019)

5.3 Letter of support from Chair and Trustee, For-Ethiopia (July 2019)

5.4 Letter of support from Operations Manager of 28 Too Many (June 2019)

5.5 Questionnaires from NGO and policy stakeholders at an engagement workshop in Addis Ababa (2016/2017)

5.6 Letter of support from Senior Advisor and Coordinator of UNFPA-UNICEF Joint Programme on the Elimination of FGC (June 2019)

5.7. Letter of support from Addis Ababa University (September 2020)

5.8. Letter of support from the Oromia Regional Government: Women, Children and Youth Affairs Bureau (9th September 2020 - note that Ethiopia uses the Julian calendar which is 7 years behind the Gregorian calendar, so the letter is dated 4th day of 13th month, 2012).